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EXAMINER
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AUGHENBAUGH, WALTER

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/993,733

Applicant(s)

JOHNSON, GREGORY D.

Examiner

Walter B Aughenbaugh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 29-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-28, drawn to a concrete formwork panel and concrete formwork system, classified in class 428, subclass 36.91.
  - II. Claims 29-31, drawn to a method of making a concrete formwork material, classified in class 156, subclass 60.
  - III. Claims 32-38, drawn to a method of forming concrete, classified in class 264, subclass 36.18.
2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as injection molding.
3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process as claimed can be practiced with another materially different product such as a concrete formwork panel made of only plastic.
4. Inventions II and III are related as process of making and process of using the product. The use as claimed cannot be practiced with a materially different product. Since the product is

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not allowable, restriction is proper between said method of making and method of using. The product claim will be examined along with the elected invention (MPEP § 806.05(i)).

5. During a telephone conversation with Carl A. Forest on November 20<sup>th</sup>, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-28.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 29-38 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

### ***Specification***

8. The disclosure is objected to because of the following informalities: "0.09 inch" on page 3, line 10 of the specification should be changed to "0.009 inch" so that the thicknesses reported in inches and millimeters are equivalent lengths. Note the correct thickness of "0.009 inch" reported on page 8, line 15.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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10. Claims 4, 6, 11, 12, 18, 21, 22 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 4, the claim does not specify the dimensions of the panel and therefore, the scope of the claim, given only the total weight of the panel, cannot be ascertained.

In regard to claim 6, thickness of "0.09 inch" should be changed to "0.009 inch" so that the thicknesses reported in inches and millimeters are equivalent lengths and are consistent with page 8, line 15 of the specification, where the correct thickness of "0.009 inch" is reported.

In regard to claims 11 and 12, the phrase "gas by volume" is indefinite; the structure and/or properties of the material intended to be recited is unclear.

In regard to claim 18, the claim should positively set forth the purpose of the "double-thick flange" and the structure necessary for carrying out the purpose, i.e., the claim is incomplete in regard to the structure of the "double-thick flange". Furthermore, the recitation that "there are two of said bends" is indefinite because the relationship between the two bends is unclear. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the two bends and how this structure contributes to the structure of the "double-thick flange". The structure intended to be recited by the term "double-thick flange" is unclear.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a

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gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationships between the “portion of said backing of said first end” and the “backing of said second end” and between the “portion of said facing of said second end” and the “facing of said first end”. The structure intended to be recited by the term “overlapping” is broad and unclear. The location of the various “portions” needs to be particularly pointed out. What portions are specifically removed from each of the respective components? The overall structure intended to be recited needs to be clarified. Furthermore, is this claim intended to be a method claim (“is removed”, “are joined”)? Please amend the language of the claim to positively recite the structure of the concrete formwork panel.

In regard to claim 22, the claim should positively set forth the purpose of the “architectural detail” and the structure necessary for carrying out the purpose, i.e., the claim is incomplete in regard to the structure of the “architectural detail”. No structure is assigned to the “architectural detail” and the claim is therefore indefinite.

In regard to claim 24, the claim should positively set forth the purpose of the “handhold” and the structure necessary for carrying out the purpose, i.e., the claim is incomplete in regard to the structure of the “handhold”. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the rib and the handhold.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-6, 8-10, 22 and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Sobolev.

In regard to claim 1, Sobolev teach a laminate comprising two metal sheets and a plastic core between and bonded to the metal sheets (col. 36, lines 8-12). The laminate is used as panels for concrete pouring forms (col. 3, lines 21-25 and line 60). Sobolev teach that the total thickness of the laminate is less than 2 inches (50.8 mm) (col. 36, lines 10-14); therefore, Sobolev teaches a panel thickness of greater than 7 mm.

In regard to claims 2 and 3, Sobolev teaches a panel thickness range of 9-15 mm (claim 2) or a panel thickness value of 12 mm (claim 3) (col. 36, lines 10-14).

In regard to claim 4, Sobolev teaches that the weight of the laminate is less than about 3.5 lb./ft.<sup>2</sup> (col. 4, lines 46-47). A panel taught by Sobolev of a suitable area weighs 77 pounds or less.

In regard to claims 5, 6, 8 and 9, Sobolev teach that the metal sheets are steel, as claimed in claim 5, or aluminum, as claimed in claim 9. In regard to claims 6 and 8, Sobolev teach that each metal sheet has a thickness between about 0.015 inch and about 0.1 inch (col. 36, lines 10-11). The claimed thicknesses of “0.09 inch” (claim 6) and “0.019 inch” (claim 8) fall within the bounds set by the numerical minimum and maximum taught by Sobolev.

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In regard to claim 10, Sobolev teach that the plastic core is a foam (col. 4, lines 44-45).

In regard to claim 22, Sobolev teach that the laminate is suitable for use as exterior building and architectural panels (col. 3, lines 59-60). "Architectural detailing" is commonly used on exterior building and architectural panels.

In regard to claim 25, Sobolev teach that the metal layers are bonded to the plastic core with an adhesive (col. 31, lines 39-40).

In regard to claim 26, Sobolev teach that it is common to join several laminate panels to produce a larger continuous panel (col. 33, lines 23-25), and that conventional rivets or other types of mechanical fasteners are used to fasten the plurality of panels together (col. 33, lines 56-57).

In regard to claims 27 and 28, Sobolev teach that the panels are fastened to a steel or aluminum frame (col. 2, lines 23-26 and col. 33, lines 66-68).

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.



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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev.

In regard to the metal layer thickness of 0.013 inch claimed in claim 7, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used steel of thickness of less than 0.015 inch, such as 0.013 inch, in order to minimize the weight of the laminate, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In regard to the claimed "gas by volume" values claimed in claims 11 and 12, Sobolev teach that a preferred filler for lowering the specific gravity of the plastic is glass microballoon filler having an average diameter up to about 1 mm (col. 12, lines 3-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have varied the size of the microballoon filler, and therefore the "gas by volume" value of the foam plastic, in order to determine the optimal microballoon size in terms of weight of the plastic depending on the desired end result, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

15. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Fitzgerald et al.

In regard to claim 13, Sobolev teaches the concrete formwork panel as discussed above. Sobolev fail to teach that the plastic is high density polyethylene. Fitzgerald et al., however,

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disclose that high density polyethylene is a suitable rigid plastic for a concrete form mold (col. 2, lines 10-12 and col. 3, lines 4-15). Therefore, one of ordinary skill in the art would have recognized to have used high density polyethylene as the plastic of the plastic core of Sobolev since high density polyethylene is notoriously well known rigid plastic for use in a concrete form mold as taught by Fitzgerald et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used high density polyethylene as the plastic of the plastic core of Sobolev since high density polyethylene is notoriously well known rigid plastic for use in a concrete form mold as taught by Fitzgerald et al.

In regard to claims 14-18, Sobolev teaches the concrete formwork panel as discussed above. Sobolev fail to teach that the panel is bent to form a flange (as claimed in claim 14), that the flange has openings formed in it (as claimed in claim 15), that the panel is notched at the bend (as claimed in claim 16) or that the bend is a 90° bend (as claimed in claim 17). Fitzgerald et al., however, disclose a panel with V-shaped cross sections 20 and 22 (i.e. notches) where the panel is bent 90° to form a mold with side walls (i.e. flanges) 12 and 14 (col. 3, lines 9-29 and Figures 1, 2 and 6). Fitzgerald et al. disclose openings 42 and 44 formed in flange 12 and openings 46 and 48 formed in flange 14 for removable pins to assure maintaining the assembled state of the mold (col. 3, lines 53-60 and Figures 2 and 6). The panel of Fitzgerald et al. has two bends (see Figures 1, 2 and 6), and bottom flange 10 is a double thick flange due to the presence of support member 82 (col. 4, lines 28-30 and Figure 6).

Therefore, one of ordinary skill in the art would have recognized to have provided one or two 90° bends in the panel of Sobolev via a notch in order to form a flange and to further provide

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openings in the flange, since it is notoriously well known in the art to bend concrete form mold panels via a notch and to provide openings in the resulting flanges in order to assure maintaining the assembled state of the mold via pins as taught by Fitzgerald et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided one or two 90° bends in the panel of Sobolev via a notch in order to form a flange and to further provide openings in the flange, since it is notoriously well known in the art to bend concrete form mold panels via a notch and to provide openings in the resulting flanges in order to assure maintaining the assembled state of the mold via pins as taught by Fitzgerald et al.

16. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Lee.

In regard to claims 19 and 20, Sobolev teaches the concrete formwork panel as discussed above. Sobolev fail to teach that the panel is bent into a hollow, columnar form where the columnar form is cylindrical. Lee, however, teach a building panel in a form for building columns, where the core is cylindrical (col. 2, lines 60-65). Therefore, one of ordinary skill in the art would have recognized to have bent the panel of Sobolev into a hollow columnar form where the columnar form is cylindrical, since it is notoriously well known to bend panels into columnar and cylindrical form in order to use the panels to build columns as taught by Lee.

In regard to claim 21, Sobolev teaches a joint where two panels are joined (Figure 7). One of ordinary skill in the art would recognize that this joint is suitable for a panel bent into a hollow columnar form as taught by Lee. Examiner designates the left panel of Figure 7 of Sobolev as the “first end”, and the right panel as the “second end”. A portion of plastic is

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removed from both the first end and the second end (col. 33, lines 25-28 and Figure 7). A portion of facing is removed from the first end, and a portion of backing is removed from the second end, to accommodate rivets 75 (col. 33, lines 48-50 and Figure 7). The facings 71 of Sobolev (Figure 7 and col. 33, line 30) are equivalent to the facing and backing as claimed in the instant application. The ends are joined with a portion of the backing of the first end overlapping the backing of the second end and with a portion of the facing of the second end overlapping the facing of the first end; i.e., the first and second ends of the facing/backing taught by Sobolev are in contact with each other, and therefore, overlap. Sobolev fails to teach that the panel is bent into a hollow, columnar form where the columnar form is cylindrical. Lee, however, teach a building panel in a form for building columns, where the panel is formed into a cylindrical shape (col. 2, lines 60-65). Therefore, one of ordinary skill in the art would have recognized to have bent the panel of Sobolev into a hollow columnar form where the columnar form is cylindrical, since it is notoriously well known to bend panels into columnar and cylindrical form in order to use the panels to build columns as taught by Lee, and to have used the joint structure taught by Sobolev as the means to join the first end of a single panel to the second end of the panel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have bent the panel of Sobolev into a hollow columnar form where the columnar form is cylindrical, since it is notoriously well known to bend panels into columnar and cylindrical form in order to use the panels to build columns as taught by Lee, and to have used the joint structure taught by Sobolev as the means to join the first end of a single panel to the second end of the panel.

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17. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Yoshida et al.

Sobolev teaches the concrete formwork panel as discussed above. Sobolev fail to teach that the panel includes a strengthening rib attached to the metal backing layer. Yoshida et al., however, disclose a concrete formwork provided with a plurality of small ribs to strengthen the plate of the formwork (col. 2, lines 48-51). Therefore, one of ordinary skill in the art would have recognized to have attached a strengthening rib to the metal backing layer of the panel of Sobolev in order to strengthen the panel as taught by Yoshida et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have attached a strengthening rib to the metal backing layer of the panel of Sobolev in order to strengthen the panel as taught by Yoshida et al.

18. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Gallis et al.

Sobolev teaches the concrete formwork panel as discussed above. Sobolev fail to teach that the panel includes a strengthening rib attached to the metal backing layer as claimed in claim 23 including a handhold as claimed in claim 24. Gallis et al., however, disclose a concrete wall form assembly having two modular units, each of which consists of stiffening ribs 16a-c for the modular unit 11a and stiffening ribs 16d-f for modular unit 11b (col. 2, lines 41-51 and Figure 1). Gallis et al. disclose that modular units 11a and 11b are provided with a pair of handles 19 which facilitates lifting of the complete unit during erection and dismantling, and that the handles 19 are fixed to the second and sixth ribs of each unit (col. 2, lines 62-67). Therefore, one of ordinary skill in the art would have recognized to have attached a strengthening rib to the metal

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backing layer of the panel of Sobolev in order to strengthen (i.e. stiffen) the panel as taught by Gallis et al., and to have provided a handhold such as the handles of Gallis et al. in order to facilitate lifting of the form assembly during erection and dismantling as taught by Gallis et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have attached a strengthening rib to the metal backing layer of the panel of Sobolev in order to strengthen (i.e. stiffen) the panel as taught by Gallis et al., and to have provided a handhold such as the handles of Gallis et al. in order to facilitate lifting of the form assembly during erection and dismantling as taught by Gallis et al.

### *Conclusion*


19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 5,137,251 to Jennings and U.S. 3,862,737 to Fuston, Jr.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B Aughenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba  
12/31/02 WBA

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

1/10/03